



MEMORANDUM

TO: Jim Eddinger, U.S. Environmental Protection Agency

FROM: Ruth Mead, Eastern Research Group

DATE: October 16, 1997

SUBJECT: Final Minutes of September 4, 1997, Solid Waste Definition Subgroup Meeting

1.0 INTRODUCTION AND PURPOSE OF MEETING

The subgroup meeting was held on September 4, 1997 at EPA in Washington, DC. Attendees are listed in Attachment 1.

This was the first meeting of the solid waste definition subgroup. The subgroup was formed by the Coordinating Committee at the July meeting. The subgroup was charged to develop recommendations for a definition of nonhazardous solid waste for the purposes of Clean Air Act section 129 regulations. The definition must be consistent with the statutory definition of solid waste in the Resource Conservation and Recovery Act (RCRA). The CC charged the subgroup to use the solid waste definition in 40 CFR part 261 RCRA hazardous waste regulations as a starting point, but made it clear that the subgroup's recommended definitions could differ from part 261 as long as there is a clear rationale for differences. The complete change from the CC is contained in Attachment 2.

The purposes of this subgroup meeting were to familiarize subgroup members with the statutory definition of solid waste and the part 261 regulatory definition, and to begin discussing solid waste definitions and approaches for developing recommendations. The meeting agenda is contained in Attachment 3.

2.0 DISCUSSION

2.1 Introductions, Materials of Interest, and Issues

Jan Connery asked the subgroup members to introduce themselves and also identify any particular fuel or waste materials of interest and issues they would like the subgroup to consider.

Issues or focuses mentioned by members included:

- focus on what “discard” means
- bring engineering common-sense to the solid waste definition
- develop simple, understandable definitions
- consider comparable fuels
- don’t inappropriately stigmatize or put at a disadvantage combustion of certain materials
- develop a definition with a sound scientific basis that will be protective of health and the environment

Materials of interest included:

- fuels used in turbines and engines
- petroleum coproducts or off spec products
- alternative fuels, especially those containing plastics
- bagasse and agricultural by-products
- wood and wood-related products and residuals
- construction/demolition materials
- tires
- culm and gob
- metal-containing wastes

- all non-fossil materials

Jim Eddinger briefly reviewed the subgroup charge (Attachment 2). He also called attention to a packet of materials he sent out containing Section 129 of the Clean Air Act (CAA), previous waste definitions, and suggestions submitted by ICCR Work Group or CC members regarding the definition of solid waste (Attachment 4).

There was a question of whether there would be useful information in rules developed under the Federal Power Act. Marv Schorr responded that in the 1980's, definitions of “waste fuels” were developed in connection with small power produces and cogeneration facilities. He will research this.

2.2 Presentation on RCRA and Definitions of Solid Waste

Mary Beth Clary of EPA/OSW gave a presentation and answered questions on RCRA and the definition of solid waste, focusing on the part 261 definition that applies to hazardous wastes under subtitle C. Her presentation is contained in Attachment 5. She noted that the statutory definition is considered to be broader than the part 261 definition. The statutory definition and solid waste definition in part 257 use the term “discarded” but do not define it. The part 261 regulations elaborate on the term “discarded”. Under part 261 materials are considered discarded if they are:

- abandoned (including by being burned),
- recycled, or
- considered “inherently waste-like”.

Recycled is the most difficult aspect of this definition. Ms. Clary referred to Table 1 in § 261.2 which shows materials and their uses, and whether they are considered solid wastes. She pointed out, on page 7 of the presentation, that the “chemical products” clause excludes gasoline, jet fuel, propane, butane, and other products normally produced as fuels from the definition of solid wastes. A subgroup member asked if there was a list of what is excluded under this clause. Ms. Clary replied that there are a series of letters documenting this. On page 8, she pointed out that the exclusion for “commercial chemical products” is broad enough to include unused

commercial products such as unused batteries and thermometers. She also discussed the direct use/reuse exclusion (page 9 of attachment 4).

Ms. Clary noted that EPA hopes to promulgate the comparable fuels exclusion by February 1998. The proposal preamble is included in the package of materials Jim Eddinger sent out before the meeting. A supplemental notice of data availability will be published in the next week or two, with a limited comment period. As criteria for the exclusion, EPA is considering a minimum Btu value, a viscosity criteria based on #6 oil, and benchmark levels for constituents based on gasoline and #2, 4, and 6 fuel oils. There was a question on whether this exemption could be used for solid materials. Ms. Clary agreed that a viscosity criteria would limit the exclusion to liquid materials.

EPA representatives noted that for the solid waste definition under Section 129, EPA would be willing to consider recommendations for a comparable fuels-type exclusion. The ICCR Section 129 criteria would not need to be exactly the same as the part 261 criteria.

2.3 Discussion of specific materials and wastes versus fuels

A handout listing the combusted materials included in the information collection request (ICR) was distributed (Attachment 6). The group discussed preliminary individual feelings on whether some of these materials might be considered fuels or wastes. Everyone agreed that the following materials are fuels: natural gas, hydrogen, #4 fuel oil, #5 fuel oil, diesel fuel, JP-8 aviation fuel, and coal. There were several other materials where most members leaned towards fuel or towards waste, but there was also a high degree of uncertainty. Some members pointed out that they did not have much knowledge of the compositions, characteristics, and uses of many of the materials on the list. Without this information they could not make an informed judgement.

An environmental representative asked why industrial representatives are concerned about whether a material is classified as a waste versus a fuel. One industrial representative replied that there is a stigma attached to the term "waste incineration", which leads to public opposition and makes permitting much more difficult. He also noted that Section 129 requires dioxin limits for all waste combustion units, even if they combust a material that is not likely to produce significant dioxin emissions. Presumably, testing will be required to demonstrate that each combustion unit is meeting the emission limits. Dioxin emission testing is very expensive and will be burdensome to industry if all non-fossil materials are classified as wastes. Under section 112 there is more

flexibility to set dioxin emission limits and require dioxin testing only where appropriate. The industry representative added that industry is committed to properly managing materials and is not seeking to avoid regulation. They realize that if materials are not regulated as wastes under Section 129, the combustion units will be regulated for HAP emissions under Section 112.

An environmental representative pointed out that Section 112 has strong language regarding regulation of persistent organic pollutants, and commented that dioxin regulations under Section 112 may be as or more stringent than under Section 129. An industry representative agreed that Section 112 may be more onerous than Section 129 because under Section 112 you start with a list of 189 pollutants and whittle down the list based on those that aren't applicable, whereas under Section 129 you start with a list of only nine pollutants.

Other member concurred that the stigma attached to burning "waste" is a major concern. One stated that the distinction between waste and fuel is not obvious, and added that we do not want to discourage use of a "waste" product as a fuel. The "waste" may be a better fuel than what is currently being combusted. Another member commented that combusting materials saves energy and reduces landfill space. They do not want to see useful fuels end up in landfills. Another member stated that biomass and other materials have been combusted as fuels for a long time, and that suddenly classifying these materials as waste could be very damaging to some industries.

An industry representative asked if the environmental caucus has a reason for wanting to classify more materials as wastes. An environmental organization representative stated that they do not care if a material is called a fuel or a waste as long as it is properly regulated. The member added that environmental community and the public are no longer focusing only on burning of "wastes"; they recognize that waste-type materials are sometimes called fuels. They are concerned with combustion of any material, particularly when many sources are located in urban areas where the health effects are greater.

Subgroup members commented that having a clear definition of solid waste such that one can distinguish what is a fuel versus a waste is very important to the ICCR effort. The Work Groups need to know what falls under Section 112 versus Section 129 so that they can determine the MACT floors for each.

2.4 Discussion of Approaches for Developing Recommendations on the Definition of Solid Waste

The subgroup discussed potential ways to approach developing recommendations on the definition of solid waste. Some suggested starting with the part 261 definition and discussing the proposed comparable fuels exclusion and how something similar could be tailored for Section 129 purposes. Others commented that the basic part 261 approach that anything that is burned is a waste is not a good starting point for Section 129. They suggested documenting the reasons that the solid waste definition for purposes of Section 129 needs to be different from the part 261 definition, and then approaching the definition with a fresh start. A member suggested starting with the part 257 definition (which is essentially the same as the statutory definition) and defining “discard” in a different way than part 261 does. The suggestions by John Ramsey and others in Attachment 4 may be a starting point. One member suggested discussing what criteria should be considered to determine if a material is a fuel or a waste. The comparable fuels exclusion used a benchmark approach. Others suggested looking at example materials to see if the subgroup members could reach some agreement on which should be wastes or fuels. Then the subgroup could determine the commonalities of those materials that seem to be wastes versus fuels and develop a set of criteria from those commonalities. A member pointed out that fuel analysis would be needed to develop criteria and make determinations. Another member noted that the type of combustion device and emissions should also be considered.

The group discussed reasons that a nonhazardous solid waste definition for purposes of Section 129 should be different from the part 261 definition. There was general agreement on the following reasons:

1. The part 261 is complicated and difficult to understand and implement. A more clear and simple definition is desirable.
2. The part 261 definition classifies all combusted material as discarded and therefore a waste, unless the material is specifically exempted.
3. Part 261 was designed to cover the universe of waste management methods. The ICCR focuses only on combustion, so many of the complexities of part 261 are not needed.

4. The purpose of part 261 was to define the universe of materials that are hazardous and have clear adverse consequences and greater risks, so the definition was more inclusive. The ICCR is looking at a different universe of materials.
5. The part 261 exclusionary approach is not necessarily appropriate for non-hazardous substances. The group may want to consider other approaches.
6. The part 261 definition does not clearly define differences between wastes and fuels. There is no definition of “fuel” in the exclusions for commercial chemical products used as fuels.
7. The comparable fuels exclusion will only deal with liquid wastes, not solids.
8. The preamble to part 261 specifies that the definition is solely for the purposes of hazardous waste.
9. The reasons that led EPA to determine that hazardous material combustion for energy recovery should be classified as waste may not necessarily apply to non-hazardous material combustion.

A member stated that there are some concepts within part 261 that are relevant and worth including in a definition for nonhazardous solid waste. It was suggested that if a different approach to the definition is pursued, the subgroup should revisit part 261 and make sure that useful elements are retained.

An EPA representative stated that within EPA, there has been discussion that an approach consistent with part 261 that elaborates on the comparable fuels exclusion would be better received than starting with a clean slate for a definition. They cautioned that EPA management will likely not be receptive to a radically different approach. There are years of history and rationale behind the part 261 definition.

Other subgroup members felt EPA was being too constrained in their approach, and that there are good reasons to take an approach that is different from part 261. A subgroup member cautioned that suddenly applying the part 261 definition to nonhazardous wastes may have broad ramifications. In particular, the fact that part 261 classifies recycled materials as wastes could have a broad impact on the recycling industry, and on recycling and reuse of materials within other industries. Such a definition could also influence how state solid waste regulations are interpreted. The 6-week time period for this subgroup to develop recommendations on the

definition is not enough time to consider these potential ramifications. Others noted that this subgroup must make progress quickly in order to allow the ICCR to meet statutory and court-ordered deadlines.

2.5 Next Meeting

The next meeting will be held the evening of September 18 and morning of September 19 in Durham, NC.

Subgroup members expressed a need to better understand the proposed comparable fuels exclusion and other exclusions that are contained in the part 261 definition. EPA/OSW staff will present information and answer questions on this topic at the next meeting.

After discussion, it was also decided that at the next meeting the group should start building general agreement on materials that all members consider to be fuels. Jeff Shumaker handed out a table that industry representatives had assembled showing characteristics of example materials. This table (contained in Attachment 7) will be considered as part of the discussion of potential fuels. Jim Eddinger noted that some fuel analysis data are available in the utility HAP report. Subgroup members asked him to provide this for the next meeting.

Other agenda topics were also agreed upon. A draft agenda for the September 18 and 19 meeting was developed and is contained in Attachment 8.

It was decided that Jeff Shumaker and Dick Van Frank will give a subgroup status report at the September 16 and 17 Coordinating Committee meeting and will also speak for the subgroup at the November Coordinating Committee meeting.

These minutes represent an accurate description of matters discussed and conclusions reached and include a copy of all reports received, issued, or approved at the September 4, 1997, meeting of the Solid Waste Definition Subgroup. Jim Eddinger, EPA.

Attachment 1
Attendance List

Attendance List

Subgroup Members:

David Cooper

Jim Eddinger

Frank Ferraro

Mike Fisher

Tim Hunt (alternate for Chuck Feerick)

Andy Roth (replaced John Ramsey)

Marv Schorr

Jeff Shumaker

Mike Soots

Dick Van Frank

Jane Williams

Others:

Jan Connery (facilitator)

Mary Beth Clary

Andy Counts

Leslye Fraser

Ruth Mead

Fred Porter

Attachment 2

Solid Waste Subgroup Charge

(from July 22 & 23, 1997 Coordinating Committee Meeting)

INDUSTRIAL COMBUSTION COORDINATED RULEMAKING

WASTE DEFINITION SUBGROUP

RECOMMENDATIONS

The Waste Definition Subgroup was tasked with developing recommendations regarding the following five issues:

1. Should the Coordinating Committee proceed with developing a recommendation for the definition of the term, “solid waste” to be used in regulations developed under section 129?
2. Assuming the answer to question #1 is yes, how should the Committee proceed to compose the Subgroup in terms of:
 - a. Number of members on the Subgroup?
 - b. Composition of the Subgroup in terms of number of members from the Coordinating Committee, workgroups, outside parties?
 - c. Composition of the Subgroup in terms of balance of stakeholder interests?
3. What should be the starting point for developing a recommended definition of solid waste?
4. What should the schedule be for completing the Subgroup’s efforts?
5. How can stakeholders not actively involved in the ICCR contribute to the Subgroup’s deliberations?

This memorandum presents recommendations from the Solid Waste Definition Subgroup on each of the above issues, which will be presented by the Subgroup at the July Coordinating Committee meeting.

1. Should the Coordinating Committee Proceed with Development of a Recommendation for a Definition of the Term, "Solid Waste," for Regulations Developed Under Section 129 of the Clean Air Act ?

The Waste Definition Subgroup reached consensus on this question and is recommending that the Coordinating Committee form a Solid Waste Definition Subgroup ("SWDS") to investigate the definition of nonhazardous solid waste for purposes of 129 regulatory development. This recommendation arises from the Subgroup's determination that a clear definition of "solid waste" is needed by the ICCR, so that the work groups (primarily the incinerator, boiler and process heater work groups) can understand and address which facilities will be considered for regulation under Section 112 versus regulation under Section 129. Existing definitions from RCRA may require clarification and/or modification in order to be useable for the ICCR. One particular area of concern with the current RCRA definitions for hazardous solid waste is the definition of "discarded" in 40 CFR 261.2.

2. If the Coordinating Committee Proceeds with Development of a Definition, What Should be the Composition of the Subgroup?

a. The Subgroup recommends that the Coordinating Committee establish a Solid Waste Definition Subgroup, preferably of 8 to 10 individuals, but no more than 12 individuals. These individuals should be selected predominately from the work groups and selected predominately from the three work groups most concerned with the definition of solid waste under section 129 (i.e., boilers, incinerators, and process heaters).

b. The number of individuals selected to serve on this Solid Waste Definition Subgroup should be selected from the work groups as follows:

- > Boiler Work Group: 2 individuals
- > Incinerator Work Group: 2 individuals
- > Process Heater Work Group: 2 individuals
- > Turbine/Engine Work Group: 1 individual*
- > EPA: 1 individual
- > At Large Selection (if appropriate): 1 - 2 individuals**

Notes:

* One individual selected to represent interests of turbine and engine work groups, if these work groups desire a representative on the subgroup.

** 1 - 2 individuals selected from the membership of the ICCR at large to ensure a “balance” of stakeholder interests, if appropriate

Attachment A contains a list of individuals nominated by the various source workgroups who are interested in being members of the SWDS to expedite the Coordinating Committee’s consideration of this recommendation. The Subgroup believes that eight to ten individuals should be sufficient to represent all stakeholder interests and achieve an appropriate “balance” (see below) among stakeholder interests. If, however, the Coordinating Committee feels the “balance” could be improved with selection of additional individuals, then the Subgroup recommends that the Committee select another one to two “at large” individuals from the membership of the ICCR, increasing the size of the Subgroup to a maximum of twelve individuals.

c. The individuals selected to serve on this Solid Waste Definition Subgroup should also be selected to achieve an overall “balance” of stakeholder interests similar to the following:

- > Sources which burn solid waste and/or non-fossil fuel: 3 individuals
- > Sources which generate solid waste and/or non-fossil fuel: 1 individual
- > Small business interests: 1 individual
- > Environmental interests: 2 individuals
- > State/local air pollution control agencies: 1 individual
- > EPA: 1 individual

3. What should be the starting point for developing a recommended definition of solid waste?

The mission of this Solid Waste Definition Subgroup should be as follows:

To develop for the Coordinating Committee’s consideration recommendations for a definition of the term, “solid waste,” to be used in regulations developed under section 129 of the Clean Air Act. The “starting point” for development of this definition will be the statutory definition of the term, “solid waste,” found in the Solid Waste Disposal Act (as amended by the Resource Conservation and Recovery Act) [42 U.S.C. § 6903(27)], and the regulatory definition of the term, “solid waste,” found in Part 260 of the Code of Federal Regulations [40 CFR § 261.2].

Although this is the starting point for the Subgroup’s deliberations, the recommendations developed by the Solid Waste Definition Subgroup may differ significantly and substantially from the definition of the term solid waste in Part 260; however, differences from the definition of solid waste in Part 260 must be accompanied by an outline of the rationale why the difference is

appropriate for regulations developed under section 129. Finally, the recommendations developed by the Subgroup must be consistent with the statutory definition of solid waste included in the Solid Waste Disposal Act (as amended by the Resource Conservation and Recovery Act) and as “reasonably” consistent with the definition of solid waste found in Part 260. While “reasonably” consistent is a judgment; it is a judgment that the Subgroup is called upon to make and explain, as appropriate, in presenting their recommendations to the Coordinating Committee.

4. What should be the schedule by which the SWDS completes its mission?

This Solid Waste Definition Subgroup should complete its mission by the September meeting of the Coordinating Committee, if possible, and definitely by the November Coordinating Committee meeting. If it is not possible to complete its mission by the September meeting, the Subgroup should present a status report to the Coordinating Committee at the September meeting, outlining progress to date and any alternatives under discussion within the Subgroup, to provide the Coordinating Committee an opportunity for additional guidance, if appropriate.

5. How can stakeholders not involved actively in the ICCR contribute to the SWDS’ efforts?

Finally, in response to specific suggestions submitted to the Solid Waste Definition Subgroup from members of the ICCR, the Subgroup should actively solicit and consider comments and concerns from stakeholders not directly represented in the ICCR during the development of their recommendations.

Respectfully submitted by ,

Members of the Waste Definition Subgroup

Fred Porter

Frank Ferraro (alternate to Jim Stumbar)

Alex Johnson

Jeff Shumaker (alternate to Norm Morrow)

Paul Eisele

John Ogle

Marvin Schorr

William O'Sullivan

Leslye Fraser (alternate to Fred Porter)

ATTACHMENT A

SOURCE WORKGROUP MEMBERS INTERESTED IN BEING MEMBERS OF THE SOLID WASTE DEFINITION SUBGROUP

Boilers (6)

Frank Ferraro

Mike Fisher

Mike Soots

David Cooper

Jim Stumbar

Jim Eddinger

Incinerators (9)

Dave Maddox

Jeff Shumaker

George Parris

Bill Perdue

Dick Van Frank

John Ramsey

Tom Tyler

David Marrack

Tony Licata

Process Heaters (5)

John Ogle

Chuck Feerick

Jane Williams

Bruno Ferraro

Lawrence Otwell

Engines/Turbines

Marvin Schorr

TBD

Attachment 3

Agenda for September 4, 1997 Meeting

Agenda for September 4, 1997 Meeting

9:00 am	Welcome
9:05 am	Introduction
9:50 am	Administration Items
10:10 am	Review of Charge and Materials
10:20 am	Break
10:35 am	Presentation
	- RCRA Overview
	- Solid Waste Definition
12:15 pm	Lunch
1:15 pm	Discussion
2:30 pm	Break
2:45 pm	Observer Comments
3:00 pm	Discussion
3:30 pm	Review of Flash Minutes
	Action Items
	Next Meeting Location/Agenda

Attachment 4

Materials Distributed Prior to Meeting

[This attachment is not available electronically. A hard copy will be placed in the docket]

Attachment 5

Presentation of RCRA and Solid Waste Definitions

An Overview of RCRA and the Definition of Solid Waste

Briefing Outline

- A. Overview of RCRA
- B. Statutory Definition of Solid Waste
- C. Regulatory Definition of Solid Waste
- D. Regulatory Definition of Hazardous Waste
- E. Hazardous Wastes That are Burned or Incinerated
- F. Comparable Fuels
- G. Overview of Other RCRA Provisions
 - 1. Categories of Generators
 - 2. Treatment, Storage and Disposal Facilities
 - 3. Upcoming RCRA Rulemakings
 - 4. Overview of Subtitle D

A. Overview of RCRA

- RCRA provides a framework for the proper management of solid and hazardous waste under Subtitles C and D.
- Subtitle C: establishes management system for hazardous waste from point of generation to final disposal. Regulations set out in 40 CFR Parts 260 to 279 address hazardous waste identification and the waste management requirements for hazardous waste generators, transporters, and treatment, storage, and disposal facilities.

A. Overview of RCRA (cont.)

- Subtitle D: requires EPA to develop guidelines for states to develop comprehensive plans to manage primarily nonhazardous solid waste, as well as household hazardous wastes and hazardous waste generated by conditionally-exempt generators. 40 CFR Parts 257 and 258 provide technical standards for municipal solid waste landfills and non-municipal, non-hazardous, waste disposal units receiving hazardous wastes generated by exempt generators.
 - The term "solid waste" used in Subtitle D refers almost exclusively to nonhazardous solid waste. It does, however, include certain hazardous wastes that are excluded from regulation under Subtitle C, such as household hazardous waste and hazardous waste generated by conditionally exempt small quantity generators (CESQGs).

B. Statutory Definition of Solid Waste (RCRA §1004(27))

Solid waste means:

- any garbage, refuse, sludge ... and other *discarded* material
- includes solid, liquid, semisolid, or contained gaseous material¹
- does not include domestic sewage, irrigation return flows, or industrial discharges subject to the Clean Water Act, or source, special nuclear, or byproduct material as defined by the Atomic Energy Act

¹ Gaseous emissions from industrial processes are covered by RCRA. These types of emissions only are covered by RCRA if they are “contained.” However, gaseous emissions (contained and uncontained) from hazardous waste treatment operations are covered by the derived-from rule (40 CFR §261.3(c)).

C. Regulatory Definition of Solid Waste (§261.2)

- Solid waste is defined in 40 CFR §261.2 as a discarded material that is:
 - abandoned by being disposed, burned, or incinerated or accumulated, stored, or treated before or in lieu of being disposed, burned, or incinerated;
 - recycled; or
 - considered “inherently waste-like.”

C. Regulatory Definition of Solid Waste (§261.2) (cont.)

Recycled:

Materials are solid wastes when recycled by being:

- (1) Used in a manner constituting disposal:
 - (A) by being applied to, or placed on, the land, or
 - (B) used to produce a product that is applied to the land
- (2) Burned for energy recovery:
 - (A) by being burned to recover energy, or
 - (B) used to produce a fuel (except for Commercial Chemical Products that are themselves fuels)
- (3) Reclaimed:
 - (A) Processed to recover a useable product; or
 - (B) Regenerated
- (4) Accumulated speculatively (accumulated without a viable market)

C. Regulatory Definition of Solid Waste (§261.2) (cont.)

Materials that are Not Solid Wastes When Reclaimed

Some materials are excluded from the definition of solid waste, even though they are recycled by being reclaimed:

- Sludges that exhibit a characteristic of hazardous waste
- By-products that exhibit a characteristic of hazardous waste
- Commercial chemical products (e.g., CCP used as a fuel, when use as a fuel is its originally intended use)

C. Regulatory Definition of Solid Waste (§261.2) (cont.)

Materials that are Not Solid Wastes When Recycled (§261.2(e))

- (1) Materials that are used or reused as ingredients in industrial processes
- (2) Materials that are used as effective substitutes for commercial products
- (3) Materials returned to original process from which they were generated without being reclaimed

C. Regulatory Definition of Solid Waste (§261.2) (cont.)

Inherently Waste-like Materials

Materials designated as “inherently waste-like” are solid wastes, regardless of how they are managed (i.e., not eligible for exclusion):

- Dioxins
- Listed and characteristic hazardous wastes fed to halogen acid furnaces (except certain brominated materials)

C. Regulatory Definition of Solid Waste (§261.2) (cont.)

Exclusions for Specific Materials (§261.4)

- 40 CFR §261.4(a) specifically excludes certain materials from the definition of solid waste, such as domestic sewage and point source discharges subject to CWA
- In addition, §261.4 excludes certain types of reclaimed materials, when
 - materials are reclaimed and inserted into original production process
 - materials are only stored in tanks and the entire process through reclamation is hard-piped or close-looped
 - reclamation does not involve controlled flame combustion
 - reclaimed material is not used to produce a fuel
 - materials are not accumulated for more than 12 months
- Generators may petition the Agency for a variance for a specific recycled material from classification as a solid waste (§260.30)

D. Regulatory Definition of Hazardous Waste

A solid waste is a hazardous waste if:

- It is listed as hazardous (§261, Subpart D)
- It exhibits a characteristic of hazardous waste (§261, Subpart C)
- It is a mixture of a solid waste and a hazardous waste
- It is derived from the treatment of a listed hazardous waste

A material is handled as a hazardous waste if:

It is a material other than a solid waste (e.g., ground water) that contains a hazardous waste, unless the material contained a characteristic hazardous waste and the material itself no longer exhibits any characteristics.

D. Regulatory Definition of Hazardous Waste

There also are exclusions from the definition of hazardous waste (§261.4(b)), e.g.,:

- Household hazardous wastes
- Fly ash, bottom ash, and flue gas emission control waste from fossil fuel combustion
- High volume mining wastes
- Cement kiln dust (except as provided in §266.112 for residues derived from burning or processing hazardous wastes)
- Drilling fluids, produced waters, and other wastes from oil and gas exploration, development, or production of crude oil, natural gas or geothermal energy

E. Hazardous Wastes that are Burned or Incinerated

- Facilities that burn hazardous wastes for energy recovery (e.g., boilers, industrial furnaces) are required to obtain a RCRA permit and comply with the operating standards and emissions control standards of 40 CFR 266, Subpart H.

Boiler: an enclosed device using controlled flame combustion and having specific characteristics (e.g., unit must have physical provisions for recovering and exporting thermal energy; combustion chamber and primary energy recovery sections must be of integral design).

Industrial Furnace: any of the following enclosed devices that are integral components of manufacturing processes and that use thermal treatment to recover materials or energy: cement kilns; lime kilns; aggregate kilns; phosphate kilns; coke ovens; blast furnaces; smelting, melting and refining furnaces; titanium dioxide chloride process oxidation reactors; methane reforming furnaces; pulping liquor recovery furnaces; and halogen acid furnaces.

E. Hazardous Wastes that are Burned or Incinerated (cont.)

- Facilities that destroy hazardous wastes in incinerators are required to obtain a RCRA permit and comply with the operating standards and the emissions control standards of 40 CFR 264/265, Subpart O.

Incinerator: any enclosed device that uses controlled flame combustion and does not meet the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is it listed as an industrial furnace; or it is an enclosed device that meets the definition of infrared incinerator or plasma arc incinerator.

E. Hazardous Wastes that are Burned or Incinerated (Cont.)

- Some hazardous wastes are exempt from full regulation, if burned for energy recovery:
 - Used oil
 - Gas recovered from landfills
 - Hazardous wastes that are generated by CESQGs

E. Hazardous Wastes that are Burned or Incinerated (Cont.)

- In addition, some other types of recovery facilities are exempt from full regulation:
 - Coke ovens that burn only decanter tank tar sludge from coking operations
 - Smelting, melting and refining furnaces that process hazardous waste solely for metal recovery (except for management of the wastes prior to burning and regulation of the residues)

E. Hazardous Wastes that are Burned or Incinerated (Cont.)

- Other types of thermal treatment units used to treat hazardous wastes are required to obtain a RCRA permit and comply with requirements for miscellaneous units (i.e., applicable provisions set for other permitted units)

Thermal

Treatment: treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste (e.g., incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge).

F. Comparable Fuels

- EPA has proposed to exclude from the definition of solid waste materials that meet specification levels for concentrations of toxic constituents and physical properties that affect burning (i.e., hazardous waste fuels that are comparable to virgin fuels) (April 19, 1996; 61 **FR** 17358; 17460).
- The proposed exclusion would apply to wastes that are similar in composition to commercially available fuels, have similar heating values as commercially-available fuels, and that pose no greater risk than burning fossil fuel. The fuel must be burned to qualify for the exclusion.

G. Overview of Other Parts of RCRA

1. Categories of Generators
2. Treatment, Storage, and Disposal Facilities (TSDFs)
3. Upcoming RCRA Rulemakings
4. Subtitle D

1. Categories of Generators

Under RCRA, a generator's regulatory status is based upon the quantity of hazardous wastes generated in a given month.

Conditionally-exempt small quantity generators (CESQGs) are generators that generate less than 100 kg of hazardous waste in a given month.

Small quantity generators (SQGs) are generators who generate more than 100 kg, but less than 1,000 kg of hazardous waste in a given month.

Large quantity generators (LQGs) generate more than 1,000 kg of hazardous waste in a given month.

1. Categories of Generators (cont.)

Conditionally-Exempt Small Quantity Generators (CESQGs) are exempt from almost all hazardous waste regulations.

Small Quantity Generators (SQGs) must comply with almost all of the requirements provided for large quantity generators, but are provided some flexibilities in complying with a few regulatory provisions (e.g., storage, recordkeeping).

2. Treatment, Storage, and Disposal Facilities (TSDFs)

Under RCRA Subtitle C, all TSDFs are required to obtain an operating permit and abide by the treatment, storage, and disposal regulations. These regulations establish design and operating criteria as well as performance standards (40 CFR Part 279; Parts 264/265, 266).

Owners/operators of TSDFs also must comply with:

- general facility standards
- preparedness and prevention requirements
- contingency plan and emergency procedures
- hazardous waste manifesting requirements
- response to releases
- closure and post-closure procedures
- financial assurance requirements

Incinerators, Boilers and Industrial Furnaces, and Thermal Treatment Units are all examples of fully-regulated TSDFs.

3. Upcoming RCRA Rulemakings

Definition of Solid Waste/Hazardous Waste Recycling:

OSW is currently developing a proposed rule to clarify the current definition of solid waste and encourage environmentally sound recycling of hazardous wastes based on the existing regulatory structure. The earliest estimate for possible proposal is December, 1998.

Hazardous Waste Identification Rule

Agency has proposed to establish constituent-specific “exit levels” for low-risk solid wastes that are designated as hazardous wastes either because they are listed as hazardous wastes, or they have been mixed with, derived from, or contain listed hazardous wastes. Generators of hazardous wastes that meet the exit levels would no longer be subject to the Subtitle C hazardous waste management requirements (December 21, 1995; 60 **FR** 66344).

3. Upcoming RCRA Rulemakings

Revised Standards for Hazardous Waste Combustors (April 19, 1996; 61 **FR** 17358)

RCRA and CAA jointly proposed a rule revising standards for hazardous waste incinerators, hazardous waste-burning cement kilns, and hazardous waste-burning lightweight aggregate kilns. The standards limit emissions of chlorinated dioxins and furans, other toxic organic compounds, toxic metals, hydrochloric acid, chlorine gas, and particulate matter. Standards reflect the performance of Maximum Achievable Control Technologies.

4. Overview of Subtitle D

Subtitle D of RCRA establishes a framework for Federal, state, and local government cooperation in controlling the management of nonhazardous solid waste.

The Federal role in the arrangement is to establish the overall regulatory direction by providing minimum nationwide standards for protecting human health and the environment, and provide technical assistance to states for planning and developing their own environmentally sound waste management practices.

The actual planning and direct implementation of solid waste programs under subtitle D remain largely state and local functions.

RCRA authorizes states to devise programs to deal with state-specific conditions and needs.

EPA retains the authority to enforce the appropriate standards in a given state.

4. Overview of Subtitle D (cont.)

RCRA, as amended by HSWA, directs EPA to publish guidelines for solid waste management, including criteria that define solid waste management practices that constitute open dumping (which are prohibited under subtitle D).

HSWA directed EPA to revise the criteria promulgated under RCRA for facilities that may receive household hazardous wastes or CESQG wastes.

4. Overview of Subtitle D (cont.)

EPA promulgated minimum federal criteria for municipal solid waste landfills on October 9, 1991 (40 CFR Part 258) that include:

- location standards
- facility design and operating criteria
- ground-water monitoring requirements
- corrective action requirements
- financial assurance requirements
- closure and post-closure care requirements

On July 1, 1996, EPA promulgated revisions to the criteria for solid waste disposal facilities and practices (40 CFR Part 257) to establish that only non-municipal solid waste landfills that meet specific standards may receive CESQG waste.

4. Overview of Subtitle D (cont.)

States are responsible for developing municipal solid waste landfill standards and permitting programs.

States then apply to EPA for a determination of adequacy for their permitting program. States that receive a determination of adequacy are then authorized to implement and enforce the permit program provisions.

Municipal solid waste landfills located in states that have not applied for and obtained a determination of adequacy must comply with the self-implementing provisions established in the federal guidelines (40 CFR Part 258).

Attachment 6

List of Materials from the Information Collection Request

Material	W	F	U	Material	W	F	U
<i>Gas</i>				<i>Solid</i>			
Biogas (includes sewage digester gas)				Agriculture Waste			
Blast furnace gas				Bagasse			
CO gas				Coal Anthracite Bituminous Sub-bituminous Lignite			
Coke oven gas				Construction derived waste			
Landfill gas				Decorative laminate/cast polymer scrap			
Natural gas				Industrial solid waste (non-hazardous)			
Petrochemical process gas				Industrial sludge			
Petroleum refining process gas				Industrial Wastewater sludge			
Hydrogen				Medical Waste			
LPG				Municipal/Commercial solid waste Type O - Trash Type 1 - Rubbish Type 2 - Refuse Type 3 - Garbage			
Process coproduct gas				Pathological Animal Remains Human Remains			
Other Gas				Peat			
<i>Liquid</i>				Petroleum coke			
No. 2 Distillate				Plastics			
No. 4 Fuel Oil				Process coproduct solid			
No. 5 Fuel Oil				Process engineered fuels			
No. 6 Residual Oil				Refuse derived fuel			
Cyanide Waste				Tires			
Diesel Fuel				Waste Coal Anthracite (culm) Bituminous (gob)			
JP-8 Aviation Fuel				Wood Dried mill lumber Timber Little Bark Mostly Bark Whole Tree Adulterated Coproduct Plywood/particleboard/finished Treated Other Wood			
Orimulsion							
Process coproduct liquid							
Waste Oil				Wood composed of >20% sander dust			
Aqueous Waste				Other Solid			
Liquid Waste							
Other Liquid							

Attachment 7

Summary Table of Characteristics of Example Materials

(Full version available in .pdf file)

Attachment 8

Draft Agenda for September 18 & 19 Meeting

Solid Waste Definition Subgroup Meeting
September 18 and 19, 1997
OMNI Hotel, Durham, NC

Thursday, September 18

7:00 pm - 8:00 pm	Primer and questions on comparable fuels exclusion and existing exclusions in Part 261
8:00 pm - 9:00 pm	Discuss role of simplicity and clarity in cost of regulations Discuss “hot buttons” on waste definition

Friday, September 19

7:30 am - 9:45 am	Discussion of “What is a fuel?” (including table handed out at September 4 meeting)
9:45 am - 10:15 am	Break
10:15 am - 11:30 am	Develop consensus on fuel list or series of questions
11:30 am - 12:00 noon	Review of Flash minutes Action Items Agenda for Next Meeting
12 noon	Adjourn